[Total No. of Pages : 2

01112A

First M.B.B.S. (2019) Examination, (Phase - I) Winter - 2023
PHYSIOLOGY - I

Total Duration : Section A+B = 3 Hours

Section B Marks : 80

SECTION - B

Instructions :
1) *Use black ball point pen only.*
2) *Do not write anything on the blank portion of the question paper. If written anything, such type of act will be considered as an attempt to resort to unfair means.*
3) *All questions are compulsory.*
4) *The number to the right indicates full marks.*
5) *Draw diagrams wherever necessary.*
6) *Distribution of syllabus in Question Paper is only meant to cover the entire syllabus within the stipulated frame. This format is a mere guideline. Questions from the syllabus can be asked in any paper. Students can not claim that the Question is out of syllabus, as this format and distribution has been given only for the sake of placement.*
7) *Use a common answer book for all sections.*

2) Brief answer question (**any ten** out of Eleven) : [10 × 2 = 20]

a) Give 4 benefits of dietary fibers.
b) What is the effect of efferent arteriolar constriction on filtration fraction and why?
c) Enumerate the two important characteristics of coronary circulation.
d) Describe the transport mechanism of glucose absorption in the renal tubule.
e) Draw activation pathway of complement system.
f) Name different body fluid compartment along with their normal values.
g) Enumerate four types of cardiovascular shock.
h) Explain the role of FEV1/FVC in differentiating between obstructive and restrictive lung diseases.
i) Explain the cause and mechanism of increased RBC count at high altitude.
j) What is the effect of decreased Extracellular fluid volume on blood pH and why?
k) Prescribe lifestyle modification for obese patient with the physiological basis.

Paper

3) Short answer questions (**any Eight** out of Nine) : [8 × 5 = 40]

a) Define GFR and give its normal value. Explain the factors affecting GFR.

b) Enumerate and describe professional qualities and roles of a physician. Describes the qualities of the doctor-patient relationship.

c) Describe the oxygen transport in blood. Draw a well-labelled diagram of oxygen haemoglobin dissociation curve. Describe factors causing its shift.

d) Enumerate the steps of Haemostasis. Explain the intrinsic pathway of coagulation.

e) Explain Law of Gut. Describe the motility of small intestine.

f) Discuss the properties of cardiac muscle. What is the significance of Frank-Starling Law?

g) Explain role of kidney in regulation of acid base balance of the body.

h) Define cardiac output. Describe the factors affecting cardiac output.

i) Define Anemia. Give the etiological and morphological classification of anemia.

4) Long answer questions (**any Two** out of Three) : [2 × 10 = 20]

a) What is Homeostasis? Explain feedback mechanism of homeostatic control with suitable example. Explain gain of a control system with suitable example. Give its equation. [2+6+2]

b) Define lung compliance. Describe the factors affecting the lung compliance. Discuss the role of surfactant in lung compliance. Add a note on respiratory distress syndrome of newborn. [1+4+3+2]

c) Give the classification of the Gastrointestinal hormones. Discuss any two hormones in detail. [2+4+4]

▽▽▽▽